

REMARKS/ARGUMENTS

This paper is submitted in response to the office action mailed June 22, 2004.

In the office action the Examiner entered certain formal objections to the drawings, specification, and claims. In addition, the Examiner rejected claims 1 and 8 under 35 U.S.C. §102(b) as being anticipated by O'Loughlin, et al. (United States Patent No. 5,794,973). The Examiner indicated that claims 2-7, 9, and 10 contained allowable subject matter.

Correction of Formal Matters

In the drawings, Figures 1 and 2 have been amended to include reference number 12. The specification has been amended to correctly include reference number "16" instead of "15" on page 8 lines 10 and 14. In addition, non-limiting amendments have been made to claims 1 and 8. Accordingly, Applicants submit that each of the formal objections entered by the Examiner have been overcome.

Section 102 Rejections

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131 (Aug. 2001) (*quoting Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Id.* (*quoting Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). In addition, "the reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

It is submitted that independent Claim 1 and dependent Claim 8 of the present Application are both novel and inventive over the disclosure of US 5,794,973 (O'Loughlin et al) in that O'Loughlin does not teach each and every element of the claimed invention.

With regard to the arrangement illustrated in Figure 2 of the O'Loughlin citation, it will be seen that an aperture 60 is provided through the wall of a chamber 48 through which gas can escape. However this aperture 60 is initially blocked by a rupturable disk 102 to prevent any flow of gas from the interior of the chamber 48 to its exterior. It is only when a predetermined pressure is reached within the chamber 48 that the rupturable disk 102 ruptures, to enable gas to escape from the interior of the chamber 48, as specifically disclosed in lines 46 - 61 of the column 3 of this citation.

In contrast, independent Claim 1 of the present Application requires at least one gas outlet to be located in a flow path from the chamber, and to have "an initial predetermined gas flow area," as defined in one embodiment by the aperture 23 and central tab formation 41 illustrated in figures 3 and 4. On the other hand, the gas outlet 60 of the chamber 48 of the O'Loughlin citation is initially completely blocked and therefore does not have an initial predetermined gas flow area. Put simply, an area which does not allow the flow of gas therethrough cannot be interpreted as a "gas flow area."

Furthermore, independent Claim 1 of the present Application requires that the gas outlet incorporates a deformable part "configured to deform in response to a predetermined gas pressure, thereby increasing the gas flow area of the gas outlet," i.e. the tab formation 41 illustrated in figure 4. While the rupturable disk 102 could conceivably be considered to be a deformable part configured to deform in response to a predetermined gas pressure, this deformation does not *increase* the gas flow area of the gas outlet from "an initial predetermined gas flow area," as required by independent Claim 1 of the present Application. It is therefore clear that independent Claim 1 of the present Application is novel over the disclosure of this prior art citation.

Claim 1 of the present Application is also inventive over the disclosures of the prior art documents. None of these prior art documents which disclose hybrid multi-stage gas generators,

incorporate a gas outlet with a deformable part configured to deform in response to a predetermined gas pressure so as to increase the gas flow area of the gas outlet. Indeed, all of the prior art documents referred to only incorporate rupturable disks which initially completely block the gas outlet apertures until they burst when the gas pressure within the gas generator reaches a predetermined value.

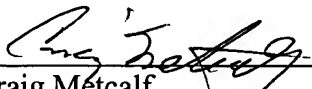
Furthermore, the O'Loughlin citation does not address the same problem as that which the arrangement recited in independent Claim 1 of the present Application seeks to overcome, and indeed will still suffer from the problem addressed by the inventor. In the O'Loughlin citation, the rupturable disc 102 ruptures at a predetermined pressure reached within the chamber 48 due the actuation of the first gas generator 122. However, once the rupturable disc 102 has ruptured, the gas flow area of the gas outlet 60 cannot increase any further, and so subsequent actuation of the second gas generator 124 will only add to the pressure within the chamber 48, thus increasing the danger of the chamber 48 exploding. In contrast, the arrangement recited in independent Claim 1 of the present Application seeks to overcome this problem by controlling the gas flow area of the gas outlet of a multi-stage gas generator. Therefore, the disclosure of the O'Loughlin citation would be dismissed by the skilled person as not being directed to solving the same problem as that sought to be solved by present independent Claim 1.

Therefore, none of these documents considered either individually, or in combination would provide any impetus for the skilled person to consider the possibility of devising a gas outlet which comprises a gas outlet located in a flow path from the chamber having a gas flow outlet area which is dependent on the gas pressure within the chamber, as required by independent Claim 1 of the present Application. Accordingly, that independent Claim 1 of the present Application is inventive.

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Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,



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Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 1 and 2. These sheets replace the original sheets including Figures 1 and 2. In Figures 1 and 2, previously omitted reference number 12 has been added.

Attachment: Replacement Sheet